

What is claimed is:

1. A method for forming a pattern by a droplet discharge system, comprising:
preparing a substrate at least one surface of which is an adhesive face having specified adhesion;
disposing droplets of a liquid containing particles dispersed in a solvent in a specified pattern on the adhesive face of the substrate by a droplet discharge system; and
vaporizing the solvent from the droplets to form a particle layer in the specified pattern on the substrate.
2. A method for forming a pattern by a droplet discharge system, comprising:
preparing a substrate at least one surface of which is an adhesive face having any one of acryl-based, silicone-based, rubber-based, petrolatum-based, vinyl-ether-based, and hot-melt-based adhesives;
disposing droplets of a liquid containing particles dispersed in a solvent in a specified pattern on the adhesive face of the substrate by a droplet discharge system; and
vaporizing the solvent from the droplets to form a particle layer in the specified pattern on the substrate.
3. A method for forming a pattern by a droplet discharge system, comprising:
preparing a substrate;
coating a liquid containing a resin having a property cured by the application of thermal energy or ultraviolet rays on at least one surface of the substrate;
increasing the viscosity of the liquid to make the surface into an adhesive face having specified adhesion;
disposing droplets of a liquid containing particles dispersed in a solvent in a specified pattern on the adhesive face of the substrate by a droplet discharge system; and

vaporizing the solvent from the droplets to form a particle layer in the specified pattern on the substrate.

4. A method for forming a pattern by a droplet discharge system according to any one of Claims 1 to 3, wherein the particles are electrically conductive ultra-fine particles and the wiring pattern is formed by a droplet discharge system.

5. A method for forming a multilayer wiring structure, comprising:

a first substrate forming process comprising: preparing a substrate at least one surface of which is an adhesive face having specified adhesion; disposing droplets of a liquid containing electrically conductive ultra-fine particles dispersed in a solvent in a specified pattern on the adhesive face of the substrate by a droplet discharge system; and vaporizing the solvent from the droplets to form a wiring pattern formed of the particle layer on the substrate;

a second substrate forming process comprising: preparing a substrate at least one surface of which is an adhesive face having specified adhesion; forming a specified through hole in the substrate; disposing droplets of a liquid containing electrically conductive ultra-fine particles dispersed in a solvent on the adhesive face of the substrate in the region including the through hole in a specified pattern by a droplet discharge system; and vaporizing the solvent from the droplets to form a wiring pattern formed of the particle layer on the substrate;

a process of stacking the first substrate and the second substrate with an adhesive such that the surface of the first substrate having the wiring pattern and the surface of the second substrate having no wiring pattern face each other and the through hole and the wiring pattern on the first substrate are overlapped with each other; and

a process of filling the through hole with an electrically conductive material to connect the wiring pattern on the first substrate with the wiring pattern on the second substrate.

6. A method for forming a multilayer wiring structure according to Claim 5, wherein the adhesive face of said first substrate and the adhesive face of said second substrate are formed of an adhesive layer made of any of acryl-based, silicone-based, rubber-based, petrolatum-based, vinyl-ether-based, and hot-melt-based adhesives.

7. A method for forming a multilayer wiring structure according to Claim 5, wherein the process of filling the through hole with an electrically conductive material is performed such that after the droplets of a liquid containing electrically conductive ultra-fine particles dispersed in a solvent have been dropped by a droplet discharge system, the solvent is vaporized from the droplets.

8. A method for forming a multilayer wiring structure according to Claim 6 or 7, wherein, in the process of filling the through hole with an electrically conductive material, the electrically conductive material is formed at least on the side wall of the through hole to thereby connect the wiring pattern on the first substrate and the wiring pattern on the second substrate with each other.

9. A method according to claim 4, wherein the drop discharge system is an ink-jet printer.

10. A method according to claim 9, wherein a distance between a surface of said substrate and nozzles of said ink-jet printer is approximately 0.3 mm.

11. A method according to claim 1, wherein said vaporizing is performed using a hot-air oven.

12. A method according to claim 1, wherein said adhesive face is formed by applying a coating liquid to said substrate and treating said coating liquid in a hot air oven.

13. A method according to claim 5, wherein the drop discharge system is an ink-jet printer.

14. A method for forming a multilayer wiring structure, comprising:

a first substrate forming process comprising: preparing a substrate at least one surface of which is an adhesive face having specified adhesion; disposing droplets of a liquid containing electrically conductive ultra-fine particles dispersed in a solvent in a specified pattern on the adhesive face of the substrate by a droplet discharge system; and vaporizing the solvent from the droplets to form a wiring pattern formed of the particle layer on the substrate, wherein the adhesive face of said first substrate comprises an adhesive layer whose adhesion has been decreased;

a second substrate forming process comprising: preparing a substrate at least one surface of which is an adhesive face having specified adhesion; forming a specified through hole in the substrate; disposing droplets of a liquid containing electrically conductive ultra-fine particles dispersed in a solvent on the adhesive face of the substrate in the region including the through hole in a specified pattern by a droplet discharge system; and vaporizing the solvent from the droplets to form a wiring pattern formed of the particle layer on the substrate;

a process of stacking the first substrate and the second substrate such that the surface of the first substrate having the wiring pattern and the surface of the second substrate having no wiring pattern face each other and the through hole and the wiring pattern on the first substrate are overlapped with each other;

removing said first substrate from said second substrate such that the wiring layer of said first substrate is adhered to a back surface of said second substrate;

adhering said second substrate to a third substrate comprising a base material, and adhesive layer, and through holes formed in the base material and the adhesive layer, wherein said wiring layer adhered to the back surface of said second substrate is adhered to portions of said base material of said third substrate; and

a process of filling the through hole with an electrically conductive material to connect the wiring pattern on the first substrate with the wiring pattern on the second substrate.

15. A method according to claim 5, wherein the adhesive layer is E1EP holder.